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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,019	04/07/2004	Nam T. Chao	101896-0245 (DEP5277)	3018
21125 7590 12/10/2008 NUTTER MCCLENNEN & FISH LLP WORLD TRADE CENTER WEST 155 SEAPORT BOULEVARD BOSTON, MA 02210-2604			EXAMINER CUMBERLEDGE, JERRY L	
			ART UNIT 3733	PAPER NUMBER
			NOTIFICATION DATE 12/10/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/709,019	Applicant(s) CHAO ET AL.	
	Examiner JERRY CUMBERLEDGE	Art Unit 3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 and 39 is/are pending in the application.
- 4a) Of the above claim(s) 7, 14, 30 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-13, 15-29, 31-34, 36, 37 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>06/04/2008 08/14/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6, 8-10, 13, 15, 16, 18-26, 28, 29, 31, 32, 34 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Berrevoets et al. (US Pub. 2005/0090821 A1).

Berrevoets et al. discloses an implantable spinal cross-connector, comprising: first and second central portions longitudinally slidably matable to one another (Fig. 12, ref. 200, 330), at least one of the first and second central portions including at least one connector member formed on a terminal end thereof (Fig. 12, ref. 120), the at least one connector member having first and second opposed jaws (Fig. 12), at least one of the jaws being selectively movable between a first, open position wherein the first and second jaws are positioned a distance apart from one another, and a second, closed position, wherein the first and second jaws are adapted to engage a spinal fixation element therebetween (Fig. 12)(Fig. 3), and at least one of the jaws being unitary with the central portion (Fig. 12) and a locking mechanism (Fig. 12, ref. 60) having a shank (Fig. 12) that is receivable within a non-expandable bore formed in the connector

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member (Fig. 12), the locking mechanism being adapted to come into contact with each of the first and second jaws to selectively lock at least one of the first and second jaws in a fixed position (Fig. 12)(Fig. 3). The head is non-eccentric (Fig. 12). The non-expandable bore has an enlarged proximal opening that is adapted to seat a non-eccentric head of the locking mechanism (Fig. 12). The second jaw on the at least one connector member is pivotally mated to the first jaw, and wherein the non-eccentric head of the locking mechanism is effective to move the second jaw from the open position to the closed position when the head is disposed within the enlarged proximal opening of the non-expandable bore (Fig. 12)(Fig. 3). The first and second jaws define a substantially C-shaped recess therebetween (Fig. 12). The first and second jaws include a slot therebetween (Fig. 12). The non-expandable bore extends through the first and second jaws (Fig. 12). The locking mechanism further includes a head formed thereon (Fig. 12, ref. 60). The first jaw is integrally formed with the at least one connector (Fig. 12), and wherein the second jaw is independent from and pivotally mated to the first jaw (Fig. 12)(Fig. 3). The locking mechanism includes a head formed on the shank (Fig. 12). The non-expandable bore is formed in the first jaw and it includes an enlarged opening formed therein for seating a head formed on the shank of the locking mechanism (Fig. 12, near ref. 60). The first and second central portions comprise substantially elongate members (Fig. 12). The first and second central portions are substantially elongate member is formed from first and second transverse members that are slidably matable to one another (Fig. 12). The first transverse member includes a female mating element, and the second transverse member

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includes a male mating element that is adapted to be received by the female mating element (Fig. 12, ref. 200, near ref. 226). The device further comprises a central locking mechanism for locking the first and second transverse members at a fixed position with respect to one another (Fig. 1, ref. 14). The device further comprises a central locking mechanism (Fig. 1, ref. 14) coupled to the first and second transverse members for allowing the first and second transverse members to be locked in a fixed position with respect to one another. The first and second central portions comprise first and second transverse members that are connected to one another by a central clamp that allows angular adjustment of the first and second transverse members with respect to one another along a longitudinal axis of the spinal cross-connector (Fig. 16)(Fig. 17). The device further comprises a central locking mechanism formed in the central clamp for locking the first and second transverse members in a fixed position with respect to one another (Fig. 160)(Fig. 17). The at least one connector member includes a bend zone formed between the connector member and at least one of the first and second central portions to allow angular movement of the connector member with respect to the central portion. The first and second jaws each include a clamping surface formed thereon that is adapted to seat a spinal rod therebetween (Fig. 3). The clamping surface of at least one of the first and second jaws includes at least one surface feature formed thereon to facilitate engagement of a rod between the first and second jaws (Fig. 12). The spinal fixation element comprises a spinal rod (Fig. 3, ref. 30). The first and second transverse members are angularly adjustable with respect to one another along a longitudinal axis of the spinal cross-connector (Fig. 16)(Fig. 17). The first and second transverse

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members can be positioned at an angle of about 20° with respect to the longitudinal axis of the spinal cross-connector (Fig. 17). At least one connector member is angularly adjustable with respect to at least one of the first and second central portion (Fig. 16)(17). The central portion comprises first and second transverse members that are movable between an open position, in which the first and second transverse members are substantially longitudinally aligned with one another, and a second position, in which the first and second transverse members are positioned at an angle with respect to one another (Fig. 16)(Fig. 17).

Berrevoets et al. disclose an implantable spinal cross-connector, comprising: first and second elongate members longitudinally slidably matable to one another (Fig. 12, ref. 200, 330); at least one connector member (Fig. 12, ref. 120) being unitary with a terminal end of at least one of the first and second elongate members and having first and second opposed jaws (Fig. 12, ref.120, 50) that are biased to an open position (Fig. 12)(Fig. 3), in which at least a portion of the first and second jaws are spaced apart from one another (Fig.12), the first and second opposed jaws including a bore formed therein (Fig. 12), The first and second opposed jaws are at least partially separated by an elongate slot, and wherein the bore extends across the elongate slot (Fig. 12).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 11, 12, 17, 27, 37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berrevoets et al. (US Pub. 2005/0090821 A1) in view of Richelsoph et al. (US Pat. 7,029,474 B2).

Berrevoets et al. disclose the claimed invention except for the shank of the locking mechanism and the bore having complementary threads. Berrevoets et al. do however disclose a locking mechanism that is utilized to lock jaws of a cross-connector (Fig. 12. ref.60).

Richelsoph et al. disclose a cross-connector that comprises a locking mechanism which comprises a complementary threaded shank and bore (Fig. 2, near ref. 18), the mechanism used to lock the jaws of a cross connector (Fig. 2).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have substituted the locking mechanism of Berrevoets et al. with the threaded locking mechanism of Richelsoph et al., in order to achieve the predictable result of locking the jaws of a cross connector.

Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berrevoets et al. (US Pub. 2005/0090821 A1) in view of Slivka et al. (US Pat. 7,066,938 B2).

Berrevoets et al. disclose the claimed invention except for the surface feature comprises a series of ridges formed on the clamping surface.

Slivka et al. disclose a cross-connector (Fig. 1) that comprises ridges on a surface (Fig. 4, ref. 27), the ridges inhibit the movement of a spinal rod (column 5, lines 34-36).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have constructed the surface of Berrevoets et al. with ridges as taught by Slivka et al. in order to inhibit the movement of a spinal rod (column 5, lines 34-36).

Allowable Subject Matter

Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRY CUMBERLEDGE whose telephone number is

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(571)272-2289. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. C./

Examiner, Art Unit 3733

/Eduardo C. Robert/

Supervisory Patent Examiner, Art Unit 3733